

2SB1070, 2SB1070A

Silicon PNP Epitaxial Planar Type

Low Voltage Switching

Complementary Pair with 2SD1538, 2SD1538A

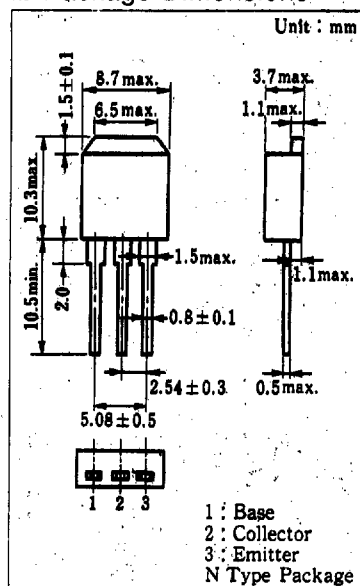
■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- High speed switching
- "N Type" package configuration with a cooling fin for direct soldering on PC board of a small-size electronic equipment

■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	2SB1070	-40	V
	2SB1070A	-50	
Collector-emitter voltage	2SB1070	-20	V
	2SB1070A	-40	
Emitter-base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-8	A
Collector current	I_C	-4	A
Collector power dissipation	$T_c=25^\circ\text{C}$	25	W
	$T_a=25^\circ\text{C}$	1.3	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions



*Surface-mount type is also available.
(Refer to p.82.)

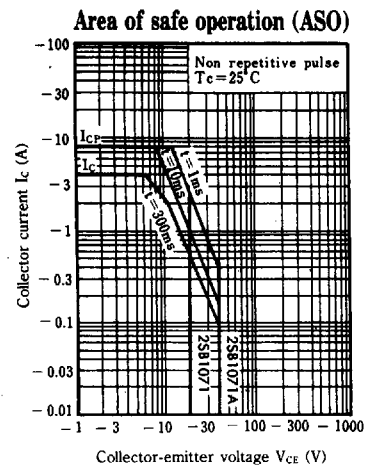
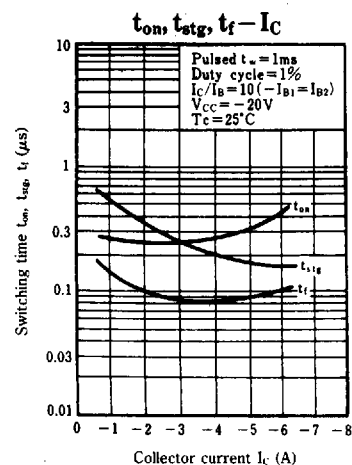
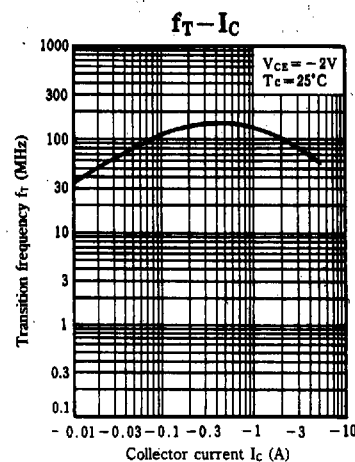
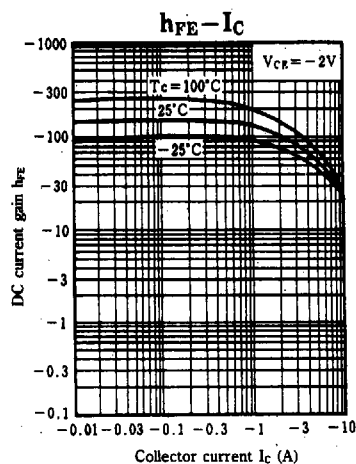
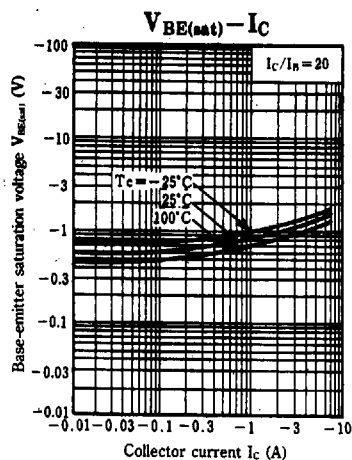
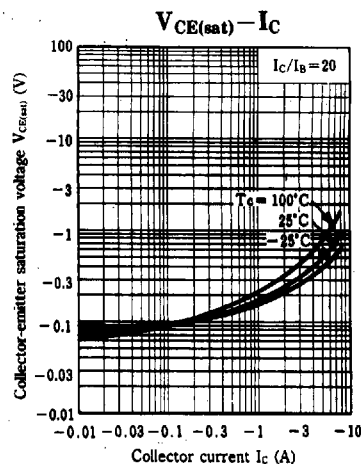
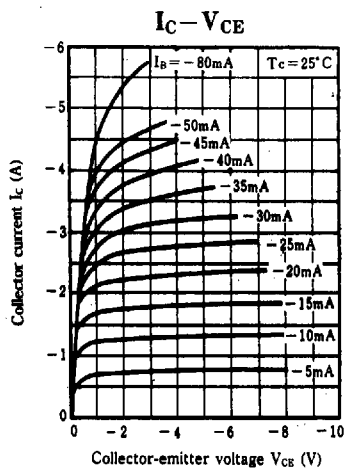
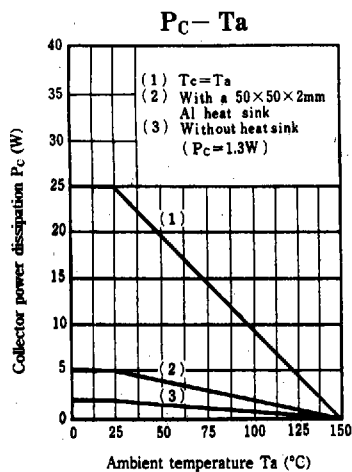
■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -40\text{ V}, I_E = 0$			-50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0$			-50	μA
Collector-emitter voltage	2SB1070 2SB1070A	V_{CEO} $I_C = -10\text{ mA}, I_B = 0$	-20			V
			-40			
DC current gain	h_{FE1}	$V_{CE} = -2\text{ V}, I_C = -0.1\text{ A}$	45			
	h_{FE2}^*	$V_{CE} = -2\text{ V}, I_C = -1\text{ A}$	60		260	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2\text{ A}, I_B = -0.1\text{ A}$			-1.5	V
Transition frequency	f_T	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}, f = 10\text{ MHz}$		150		MHz
Turn-on time	t_{on}	$I_C = -2\text{ A}, I_{B1} = -0.2\text{ A}, I_{B2} = 0.2\text{ A}$		0.3		μs
Storage time	t_{sig}			0.4		μs
Collector current fall time	t_f			0.1		μs

* h_{FE2} Classifications

Class	R	Q	P
h_{FE2}	60 ~ 120	90 ~ 180	130 ~ 260

■ 6932852 0016218 27T ■



Note) Refer to P.257 (on 2SB1191/A) for $R_{\theta(ja)} - t$ characteristics.